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EXAMINER

LAFORGIA, CHRISTIAN A

ART UNIT	PAPER NUMBER
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2131

DATE MAILED: 03/30/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/468,230

Applicant(s)

LIEBL ET AL.

Examiner

Christian La Forgia

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 07 January 2004.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-29 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-29 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

DETAILED ACTION

1. The amendment filed on 07 January 2004 is noted and made of record.
2. Claims 1 through 29 have been presented for examination.

Response to Arguments

3. Applicant's arguments filed 07 January 2004 have been fully considered but they are not persuasive.
4. In response to applicant's argument that there is no suggestion to combine the references, the examiner recognizes that obviousness can only be established by combining or modifying the teachings of the prior art to produce the claimed invention where there is some teaching, suggestion, or motivation to do so found either in the references themselves or in the knowledge generally available to one of ordinary skill in the art. See *In re Fine*, 837 F.2d 1071, 5 USPQ2d 1596 (Fed. Cir. 1988) and *In re Jones*, 958 F.2d 347, 21 USPQ2d 1941 (Fed. Cir. 1992). In this case, there is a general knowledge available to those of ordinary skill in the art.
5. In response to applicant's argument that the examiner's conclusion of obviousness is based upon improper hindsight reasoning, it must be recognized that any judgment on obviousness is in a sense necessarily a reconstruction based upon hindsight reasoning. But so long as it takes into account only knowledge which was within the level of ordinary skill at the time the claimed invention was made, and does not include knowledge gleaned only from the applicant's disclosure, such a reconstruction is proper. See *In re McLaughlin*, 443 F.2d 1392, 170 USPQ 209 (CCPA 1971). In this case, the fact that the Examiner's reasons for combining the references can be found in the instant application is a mere coincidence. The reason digital signatures exist is to verify the subject making a claim is actually that subject. Similarities can

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be drawn between digital signatures and signatures found on the back of debit and credit cards.

When a purchase is made with a debit or credit card, the signature on the receipt is compared to the signature on the back of the card to authorize the use of the card. In a similar manner, digital signatures are used to verify an identity in electronic transactions, therefore, if the digital signatures on record match, the electronic transaction can be completed.

6. To revisit the Applicant's argument that there is no reason to combine the references, in addition to the Applicant's argument that the encrypted signature is not compared or authenticated with a previously stored encrypted signature, the Examiner disagrees and directs the Applicant's attention to column 3, lines 28-56 of Chainer. To quote a part of the cited section, Chainer states:

The use of cryptography and digital signatures prevents falsifying records.

Chainer also states:

It is important that the smart card from which signature data was received can be authenticated to ensure that the signature data has not been altered.

Thus, Chainer discloses authenticating an encrypted signature with a previously stored encrypted signature, as well as provide motivation for combining the references.

7. See further rejections that follow.

Claim Rejections - 35 USC § 103

8. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

9. Claims 1 through 7, 11 through 17, and 21 through 29 are rejected under 35 U.S.C. 103(a) as being unpatentable over United States Patent No. 6,134,48 to Sasaki et al., hereinafter Sasaki, in lieu of obviousness.

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10. As per claim 1, Sasaki teaches a method for preventing unauthorized downloading of software into a diagnostic tool, comprising the steps of:

providing a first external storage device that is electrically coupled to the diagnostic tool, the first external storage device including a first security signature (Figures 1 [block 7], 7 [block 7], 20 [block 7]; column 4, lines 52-58; column 5, lines 7-18);

providing a second external storage device that is electrically coupled to the diagnostic tool, the second external storage device including software (Figure 1 [blocks 30, 33]; column 4, line 59 to column 5, line 7); and

downloading the software into an internal storage device of the diagnostic tool when a second security signature included within the diagnostic tool is the same as the first security signature included within the first external storage device (column 4, lines 50-58). It would have been obvious to one of ordinary skill in the art at the time the invention was made to include the two security signatures. One would be motivated to include the signatures as it would create a method to ensure the external storage device was what it claimed to be. By verifying the external storage device it prevents corrupting the diagnostic tool. Other instances of using an external storage device with matching signature authentication can be seen in U.S. Patent No. 6,525,672 to Chainer et al.

11. Regarding claims 2 and 12, Sasaki teaches wherein the first external storage device is a smart card that provides the first security signature to the diagnostic tool through a smart card reader (Figure 1 [blocks 7, 28], 7 [block 7], 20 [block 7]; column 4, lines 49-58).

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12. Regarding claims 3 and 13, Sasaki teaches wherein the second external storage device is electrically coupled to the diagnostic tool through a serial port (Figure 1 [blocks 24, 30]; column 4, lines 16-29; column 4, line 59 to column 5, line 7). It is inherent to the system of Sasaki to provide a serial port to interface to the host computer.

13. With regards to claims 4 and 14, Sasaki teaches wherein the serial port is a USB port (Figure 1 [blocks 24, 30]; column 4, lines 16-29; column 4, line 59 to column 5, line 7). It would have been obvious to one of ordinary skill in the art at the time the invention was made to include a USB port. One would be motivated to include a USB port because they are easy to set up and maintain, and offer a reliable high-speed connection between the diagnostic tool and the host computer.

14. With regards to claims 5 and 15, Sasaki teaches wherein the serial port is a RS232 port (Figure 1 [blocks 24, 30]; column 4, lines 16-29; column 4, line 59 to column 5, line 7). It would have been obvious to one of ordinary skill in the art at the time the invention was made to include a RS232 port. One would be motivated to include a RS232 port because they are easy to set up and maintain, and offer a reliable high-speed connection between the diagnostic tool and the host computer.

15. With regards to claims 6 and 16, Sasaki teaches wherein the serial port is an IrDA compatible infrared port (Figure 1 [blocks 24, 30]; column 4, lines 16-29; column 4, line 59 to column 5, line 7). It would have been obvious to one of ordinary skill in the art at the time the

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invention was made to include a IrDA port. One would be motivated to include a IrDA port because they are easy to set up and maintain, and offer a reliable high-speed connection between the diagnostic tool and the host computer. Additionally, the IrDA port offers more flexibility as it is not inhibited by any wires.

16. With regards to claims 7 and 17, Sasaki teaches wherein the serial port is an IEEE 1394 port (Figure 1 [blocks 24, 30]; column 4, lines 16-29; column 4, line 59 to column 5, line 7). It would have been obvious to one of ordinary skill in the art at the time the invention was made to include an IEEE 1394 port. One would be motivated to include an IEEE 1394 port because they are easy to set up and maintain, and offer a reliable high-speed connection between the diagnostic tool and the host computer.

17. As per claim 11, Sasaki teaches a diagnostic tool for communicating with a plurality of motor vehicle control units, the diagnostic tool preventing the unauthorized downloading of software into the diagnostic tool, the diagnostic tool comprising:

a processor for controlling the downloading of software into the diagnostic tool (Figure 1 [block 20]; column 4, lines 30-41);

a first port for electrically coupling the processor to a first storage device, the first storage device including a first security signature (Figures 1 [block 7], 7 [block 7], 20 [block 7]; column 4, lines 52-58; column 5, lines 7-18); and

a second port for electrically coupling the processor to a second storage device, the second storage device including software, wherein the diagnostic tool downloads the software

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into a third storage device located within the diagnostic tool when a second security signature stored within the diagnostic tool is the same as the first security signature included within the first storage device (Figure 1 [blocks 24, 30, 33]; column 4, line 50 to column 5, line 7). It would have been obvious to one of ordinary skill in the art at the time the invention was made to include the two security signatures. One would be motivated to include the signatures as it would create a method to ensure the external storage device was what it claimed to be. By verifying the external storage device it prevents corrupting the diagnostic tool. Other instances of using an external storage device with matching signature authentication can be seen in U.S. Patent No. 6,525,672 to Chainer et al.

18. Regarding claims 21, 26, and 29, Sasaki teaches wherein the first storage device is a smart card and the second storage device is a flash ROM (Figure 1 [blocks 7, 28], 7 [block 7], 20 [block 7]; column 4, line to column 5, line 7). It would have been obvious to one of ordinary skill in the art at the time the invention was made to make the second storage device a flash ROM. One would be motivated to do so as it would allow for the storage of updates and data.

19. Regarding claim 22, Sasaki teaches wherein the first storage device is a smart card and the second storage device is an EEPROM (Figure 1 [blocks 7, 28], 7 [block 7], 20 [block 7]; column 4, line to column 5, line 7). It would have been obvious to one of ordinary skill in the art at the time the invention was made to make the second storage device a EEPROM. One would be motivated to do so as it would allow for the storage of updates and data.

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20. Regarding claim 23, Sasaki teaches further including:

a keypad coupled to the processor for receiving input from a user, the user initiating the downloading of the software by selecting a particular menu item from a list of menu items (Figure 1 [block 26]; column 4, lines 16-29); and

a display coupled to the processor for providing the list of menu items to the user of the diagnostic tool (Figure 1 [block 27]; column 4, lines 16-29).

21. As per claim 24, Sasaki teaches a method for preventing unauthorized downloading of software into a diagnostic tool, comprising the steps of:

providing an external storage device that is electrically coupled to the diagnostic tool, the external storage device including a first security signature and software (Figures 1 [block 7], 7 [block 7], 20 [block 7]; column 4, lines 52-58; column 5, lines 7-18); and

downloading the software into a memory of the diagnostic tool when a second security signature included within the diagnostic tool is the same as the first security signature included within the external storage device (column 4, lines 50-58). It would have been obvious to one of ordinary skill in the art at the time the invention was made to include the two security signatures. One would be motivated to include the signatures as it would create a method to ensure the external storage device was what it claimed to be. By verifying the external storage device it prevents corrupting the diagnostic tool. Other instances of using an external storage device with matching signature authentication can be seen in U.S. Patent No. 6,525,672 to Chainer et al.

22. Regarding claims 25 and 28, Sasaki teaches further including the step of:

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storing the second security signature of the diagnostic tool as the first security signature on the external storage device when the first security signature is determined to be a default value (Figure 1 [blocks 30, 33]; column 4, line 50 to column 5, line 7).

23. As per claim 27, Sasaki teaches a diagnostic tool for communicating with a plurality of motor vehicle control units, the diagnostic tool preventing the unauthorized downloading of software by the diagnostic tool, the diagnostic tool comprising:

- a processor for executing the software (Figure 1 [block 20]; column 4, lines 30-41);
- a port for electrically coupling the processor to an external storage device, the external storage device including a first security signature and software, where the diagnostic tool downloads the software into a memory of the diagnostic tool when a second security signature included within the diagnostic tool is the same as the first security signature included within the external storage device (Figures 1 [blocks 7, 24, 30, 33], 7 [block 7], 20 [block 7]; column 4, lines 52-58; column 5, lines 7-18). It would have been obvious to one of ordinary skill in the art at the time the invention was made to include the two security signatures. One would be motivated to include the signatures as it would create a method to ensure the external storage device was what it claimed to be. By verifying the external storage device it prevents corrupting the diagnostic tool. Other instances of using an external storage device with matching signature authentication can be seen in U.S. Patent No. 6,525,672 to Chainer et al.

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24. Claims 8 through 10 and 18 through 20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Sasaki in view of United States Patent No. 6,148,400 to Arnold, hereinafter Arnold.

25. Regarding claims 8 and 18, Sasaki does not teach:

modifying the first security signature upon successful downloading of the software into the internal storage device located within the diagnostic tool.

26. Arnold teaches further comprising the step of:

modifying the first security signature upon successful downloading of the software into the internal storage device located within the diagnostic tool (Figure 3 [block 320]; column 14, lines 36-42). It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the first signature after downloading the software. One would be motivated to modify the first signature as it would prevent someone from reusing the first external storage device to access the data for a second time.

27. With regards to claims 9 and 19, Sasaki does not teach wherein the first security signature is modified so that it cannot be further utilized to download the software into any diagnostic tool.

28. Arnold teaches wherein the first security signature is modified so that it cannot be further utilized to download the software into any diagnostic tool (Figure 3 [block 320]; column 14, lines 36-42). It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the first signature after downloading the software. One would be motivated to modify the first signature as it would prevent someone from reusing the first external storage device to access the data for a second time.

29. Concerning claims 10 and 20, Sasaki does not teach wherein the first security signature is erased.

30. Arnold teaches wherein the first security signature is erased (Figure 3 [block 320]; column 14, lines 36-42). It would have been obvious to one of ordinary skill in the art at the time the invention was made to erase the first signature after downloading the software. One would be motivated to modify the first signature as it would prevent someone from reusing the first external storage device to access the data for a second time.

Conclusion

31. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

32. A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

33. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Christian La Forgia whose telephone number is (703) 305-7704. The examiner can normally be reached on Monday thru Thursday 7-5.


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34. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Ayaz Sheikh can be reached on (703) 305-9648. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

35. Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Christian LaForgia
Patent Examiner
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